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OCD Lesions Of The Patella And Trochlea In Children

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Objectives: The purpose of this report is to evaluate the functional outcomes of surgical management of OCD lesions of the patella and trochlea in children. Secondary aims include elucidating predictors for higher functional outcomes, determining complication rates, surgical satisfaction and ability to return to sports.

Methods: Patients age ≤ 18 years who were surgically treated for OCD of the patellar or trochlea were identified. Charts were queried to record patient/lesion data, surgical procedure, results and complications. Pre- and postoperative imaging was reviewed. Patients were asked to complete a follow-up athletic questionnaire and a Pediatric International Knee Documentation Committee (Pedi-IKDC) score. Statistical analysis was conducted to look for predictors for reoperation, residual pain, ability to return to sports and lower Pedi-IKDC scores.

Results: Twenty-six children (9 female, 17 male, 3 bilateral) were identified. Mean age was 14.7 (range: 9-18), 21/29 (72%) had open physes, and median follow-up was 3.8 years (range: 1-9 years). The most common location was the trochlea (17/29, 59%). Twenty-two lesions (76%) underwent transarticular drilling (n=14) or drilling with fixation (8), while 7 underwent excision and marrow stimulation. Four patients (14%) required unplanned re-operation. Internal fixation was predictive of reoperation (OR= 8.7, 95% CI= 2.8-26.9, P=0.04). At final follow up, 14 knees (48%) were pain-free, 14 (48%) had mild residual pain. Female gender was predictive of residual pain (OR= 9, 95% CI= 2-56, P=0.02). Twenty-two patients (85%) returned to sports. Longer duration of preoperative pain negatively impacted return to sports (OR= 0.32, 95% CI= 0.05-0.97, P=0.04). On postoperative imaging, the lesion appeared completely healed in 5 cases (42%) and partially healed in 12 cases (58%). All 15 survey respondents were satisfied with surgery. The mean Pedi-IKDC score was 82.4 ± 17.8 (range: 40.2 -100).

Conclusion: Surgical treatment of patellofemoral OCD in children produces a high rate of satisfaction and return to sports. Female gender, prolonged duration of symptoms and internal fixation may be associated with worse outcomes.

